

**PATENT**

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re the application of:	)	
	)	Group Art Unit: 2627
H. Gill	)	
	)	Examiner: Klimowicz, W.
Application No. 10/781,232	)	
	)	Atty. Docket No. HIT1P058/
	)	HSJ920030249US1
Filed: 02/18/2004	)	
	)	Date: October 11, 2006
For: HIGH HC REFERENCE LAYER	)	
STRUCTURE FOR SELF-PINNED	)	
GMR HEADS	)	

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**INFORMATION DISCLOSURE STATEMENT  
UNDER 37 CFR §§ 1.56 AND 1.97(c)**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Dear Sir:

The reference(s) listed in the attached PTO Form 1449, cop(ies) of which is attached (when necessary), may be material to examination of the above-identified patent application. Applicants submit the reference(s) in compliance with their duty of disclosure pursuant to 37 CFR §§ 1.56 and 1.97. The Examiner is requested to make the reference(s) of official record in this application.

This Information Disclosure Statement is not to be construed as a representation that a search has been made, that additional information material to the examination of this application does not exist, or that the reference(s) indeed constitutes prior art.

This Information Disclosure Statement is being filed after the mailing date of a non-final Office Action. Accordingly, applicants are including payment in the amount of \$180.00 for the fee due in connection with the filing of this Information Disclosure Statement. However, if it is determined that any additional fees are due, the Commissioner is hereby authorized to charge such fees or credit any overpayment to Deposit Account 50-2587 (Order No. HSJ920030249US1).

Respectfully submitted,  
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<b>Form 1449 (Modified)</b>  <b>Information Disclosure Statement By Applicant</b>  (Use Several Sheets if Necessary)	<b>Atty. Docket No.</b> HIT1P058/HSJ920030249US1	<b>Application No.:</b> 10/781,232
	<b>Applicant:</b> Gill	
	<b>Filing Date:</b> 02/18/2004	<b>Group Art Unit:</b> 2627

#### U.S. Patent Documents

Examiner Initial	No.	Patent No.	Date	Patentee	Class	Sub-class
	A	5,206,590	04/1993	Dieny et al.	324	252
	B	5,508,867	04/1996	Cain et al.	360	113
	C	5,018,037	05/1991	Krounbi et al.	360	113
	D	6,831,816	12/2004	Gill	360	324.12
	E	6,838,740	01/2005	Huai et al.	257	421
	F	2003/0151859	08/2003	Hayashi et al.	360	324.12
	G	2004/0008454	01/2004	Gill	360	324.12
	H	2005/0111148	05/2005	Li et al.	360	324.12
	I					
	J					
	K					

#### Foreign Patent or Published Foreign Patent Application

Examiner Initial	No.	Document No.	Publication Date	Country or Patent Office	Class	Sub-class	Translation	
							Yes	No
	L							
	M							
	N							
	O							
	P							

#### Other Documents

Examiner Initial	No.	Author, Title, Date, Place (e.g. Journal) of Publication
	R	Copy of Office Action from US 10/780,978 mailed 6/9/2006.
	S	
	T	
Examiner		Date Considered

Examiner: Initial citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<b>Form 1449 (Modified)</b>	<b>Atty. Docket No.</b>	<b>Application No.:</b>
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<b>Information Disclosure Statement By Applicant</b>  (Use Several Sheets if Necessary)	HIT1P058/HSJ920030249US1	10/781,232
	Applicant:	
	Gill	
	Filing Date: 02/18/2004	Group Art Unit: 2627

### U.S. Patent Documents

Examiner Initial	No.	Patent No.	Date	Patentee	Class	Sub-class	Filing Date
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	20	Gijs, M. et al., "Perpendicular giant magnetoresistance of microstructures in Fe/Cr and Co/Cu multilayers (invited)", <i>J. Appl. Phys.</i> , Vol. 75, No. 10, May 15, 1994
	21	Herper, H. et al., "Ab initio study of CPP transport in Fe/Cr/Fe trilayers: influence of transition metal impurities", <i>Mat. Res. Soc. Symp. Proc.</i> , Vol. 746, 2003
	22	Mathon, J., "Ab initio calculation of the perpendicular giant magnetoresistance of finite Co/Cu(001) and Fe/Cr(001) superlattices with fluctuating layer thickness", <i>Physical Review B</i> , Volume 55, No. 2, January 1, 1997
	23	Parkin, S., "Oscillations in Exchange Coupling and Magnetoresistance in Metallic Superlattice Structures: Co/Ru, Co/Cr, and Fe/Cr", <i>Physical Review Letters</i> , Volume 64, No. 19, May 7, 1990
Examiner	Date Considered	